DOCUMENT RESUME

ED 333 987 PS 019 637

AUTHOR Early, Diane; Barrett, Marty
TITLE Predicting Learned Helplessness and Achievement: The Role of Locus on Control and Motivational Orientation.
PUB DATE Apr 91
NOTE 9p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Seattle, WA, April 18-20, 1991).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; *Elementary School Students; Grade 5; Grade 6; *Helplessness; Incentives; Intermediate Grades; *Locus of Control; Longitudinal Studies; *Predictor Variables; *Self Motivation
IDENTIFIERS *Motivational Orientation

ABSTRACT

This 2-year study examined the relative potency of locus of control (LOC) and motivational orientation (MO) as predictors of standardized achievement scores and learned helplessness. Also tested was the prediction that children with an extrinsic MO would be prone to adopt an external LOC over time. In the first year of the study, subjects were 158 fifth-graders; in the second year, subjects were 70 of the first-year participants. It was thought that MO should predict children's helplessness and achievement more accurately than LOC, because MO, taking into account a child's sense of control over reasons for initiating task engagement and regulating task strategies, is a more global construct than LOC, which focuses on the child's perceived internal sense of control over the outcome of the achievement situation. It was assumed that adopting an extrinsic orientation, which predisposes children to helplessness, ultimately produces an external LOC. Hypotheses were tested using self-report measures of MO, LOC, and visual discrimination problems with a failure manipulation to test for helplessness. Standardized test scores were used as an indicator of achievement. Data supported the hypotheses. The intrinsic motivation perspective better predicted achievement and helplessness than did the LOC perspective. Extrinsically motivated children were more prone to develop external loci of control than were those intrinsically motivated. Results are discussed in terms of theoretical and practical implications for researchers and educators. (RH)

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Predicting Learned Helplessness and Achievement: The Role of Locus of Control and Motivational Orientation

Diane Early and Marty Barrett

University of Colorado, Boulder

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PS 019637

Poster Presented at the Society for Research on Child Development, April 1991, Seattle.

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ABSTRACT

Previous research has shown a correlation between a child's locus of control and his/her propensity for helplessness, but research is lacking on the question of personological variables which predict a child's locus of control. The present study aims to clarify the relationship between locus of control and motivational orientation as predictors of achievement and learned helplessness. We predicted that motivational orientation would be a significant predictor of locus of control, achievement and helplessness, and that motivational orientation would be a better predictor of achievement and helplessness than locus of control. These hypotheses were tested in a two year study using self-report measures of motivational orientation and locus of control and visual discrimination problems with a failure manipulation to test for helplessness. Standardized test scores were used as an indicator of achievement. The data supported our hypotheses. Results are discussed in terms of the theoretical and practical implications for researchers and educators.

INTRODUCTION

Many recent theories of achievement focus on the importance of children's perceived control as a predictor of their academic achievement (Stipek & Weisz, 1981). Furthermore, perceived control variables have been linked to the maladaptive response pattern labelled "learned helplessness" (Seligman, Maier & Solomon,1971) -- a response pattern characterized by low persistence, low interest and reversion to immature problem solving strategies after encountering an uncontrollable experience such as failure (Boggiano & Barrett, 1985, 1990; Dweck & Reppucci, 1973; Fincham & Cain, 1986).

Two major constructs linking perceived control, susceptibility to helplessness and achievement (Stipek & Weisz, 1981) are locus of control and intrinsic motivation. The proponents of the locus of control perspective (Lefcourt, 1976; Rotter, 1966) posit that the child's perceived internal sense of control over the *outcome* in the achievement situation is the crucial variable predicting subsequent achievement related behaviors. Advocates of the intrinsic motivation perspective, on the other hand, maintain that it is perceived control over *initiation and engagement* in the process of mastering the achievement task which is critical in predicting indices of achievement and propensity to helplessness (Boggiano & Barrett, 1985; Deci & Ryan, 1987; Harter, 1978).

The goal of the present research is to examine the relative potency of locus of control and motivational orientation as predictors of standardized achievement scores and learned helplessness. We hypothesized that motivational orientation should predict children's propensity to helplessness and differences in achievement more accurately than locus of control. Motivational orientation is a more global construct than locus of control because it takes into account a child's sense of control over reasons for initiating task engagement and regulation of task strategies (Boggiano & Barrett, 1985). Indeed, it is assumed here that adopting an extrinsic orientation, which predisposes children to helplessness, ultimately produces an external locus of control. Thus, a second major goal of this study was to test the prediction that children with an extrinsic motivational orientation would be prone to adopt an external locus of control over time.

If the predictions proposed here are confirmed, the pattern of data attained would have clear import for theories of achievement in children. Moreover, the data would provide strategies for educators concerned with optimizing children's overall achievement and responsiveness to evaluative feedback.

METHOD

158 fifth graders participated in two sessions during year one. During the first of these sessions, motivational orientation was measured using Harter's (1981) "Scale of Intrinsic versus Extrinsic Orientation in The Classroom," locus of control was measured using Crandall, Katkovsky, & Crandall's (1965) Intellectual Achievement Responsibility Scale (I.A.R.) and

perception of cognitive competence was measured using Harter's "What I Am Like" scale.

Approximately two weeks later, children were given a series of visual discrimination problems, taken from Diener and Dweck (1978, 1980). This series consisted of eight training problems and four testing problems. During the testing problems, bogus failure feedback was provided and changes in hypothesis testing strategies were noted.

Achievement was measured using percentile scores from the math and reading portions of the Iowa Test of Basic Skills. This test was administered by the school at the end of the fifth grade and scores from it were obtained for 70 of the subjects.

One year later, 70 of the children completed the measures of motivational orientation, locus of control, and perception of cognitive competence for a second time.

RESULTS

Hypothesis I:

Motivational orientation is a more reliable predictor of achievement than locus of control, when controlling for perception of cognitive competence.

Finding:

Combined percentile scores from the reading and math sections of the Iowa Test of Basic Skills were regressed onto the complete set of questionnaire scores from year one (i.e., Harter's measure of motivational orientation, the Intellectual Achievement Responsibility Questionnaire, and the Perception of Competence Questionnaire). This analysis indicated that motivational orientation was the only reliable predictor of combined math and reading achievement (b=25.21, F=19.44, p<0.0001).

Standardized Test Scores Regressed Onto All Scales

Scale	b weight	F(1, 69)	p<
Motivational Orientation	25.208	19.439	0.0001
Locus of Control (I. A. R.)	-7.553	0.653	0.422
Perception of Competence	-1.213	0.102	0.750

note: Higher scores on Motivational Orientation indicate more of an intrinsic orientation, higher scores on Locus of Control indicate more of an internal locus of control, and higher scores on Perception of Competence indicate a higher view of one's competence.

Hypothesis II:

Motivational orientation is a stronger predictor of helplessness than locus of control, when controlling for perception of cognitive competence.

Finding:

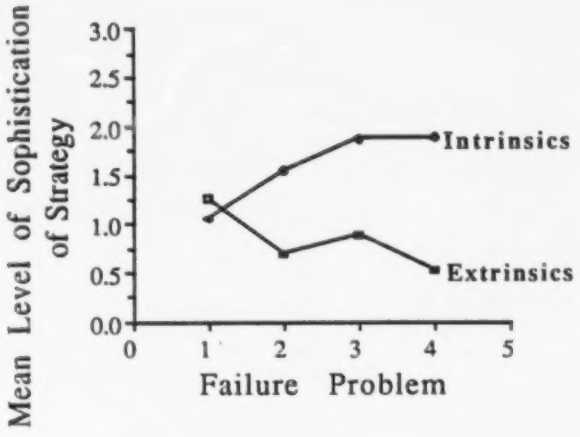
The linear decrement of strategy use during the failure trials was regressed onto the full set of individual differences measures (Judd & McClelland, 1988). This analysis indicates how well the individual differences measure predict the impact of the failure experience on strategy use. According to this analysis, motivational orientation was the only significant predictor of this linear relationship ($b = 0.701$, $F(1, 157) = 9.303$, $p < 0.003$).

Linear Decrement in Strategy Regressed onto All Scales.

Scale	b weight	F(1, 157)	p<
Motivational Orientation	0.701	9.303	0.003
Locus of Control (I. A. R.)	0.712	3.420	0.066
Perception of Competence	-0.101	0.435	0.565

Next, to examine whether the direction of the linear trend in sophistication of strategy use over the four test problems differs for intrinsics versus extrinsics, a median split was conducted on the motivational orientation scores. (Children scoring above the median, 2.72, were labelled intrinsic, while those scoring below the median were labelled extrinsic.) The linear component of sophistication of strategy was then analyzed separately for the extrinsic and the intrinsic groups. These analyses indicated that both of the linear relationships were significantly different from zero and were in opposing directions for the two groups. As anticipated, children in the extrinsic group decreased in level of sophistication of strategy over the four test problems, $b = -0.46$, $F(1, 78) = 24.41$, $p < 0.0001$; whereas, children in the intrinsic group showed the opposite linear trend. Children in the intrinsic group used increasingly sophisticated strategies, $b = 0.61$, $F(1, 79) = 21.72$, $p < 0.0001$.

Linear Decrement During Failure Problems: Intrinsics versus Extrinsics



In regard to the other individual differences variables examined, only the Intellectual Achievement Responsibility Questionnaire (I.A.R.) approached significance as a predictor of the linear trend, $\underline{b} = 0.712$, $\underline{F}\ (1, 157) = 3.420$, $\underline{p} < 0.066$. However, when the linear component was regressed onto only motivational orientation and the I.A.R. scores, the standardized beta weights revealed that motivational orientation (std. beta = 0.277, $\underline{p} < 0.0004$) was a stronger predictor relative to the I.A.R.(std. beta = 0.137, $\underline{p} < 0.076$).

Hypothesis III:

Children with an extrinsic motivational orientation should be prone to adopting a more external locus of control over time.

Findings:

The scores from the Motivational Orientation Questionnaire, the I.A.R. and the Scale of Cognitive Competence at year two were regressed onto the scores from the same scales at year one. These regressions indicated that motivational orientation at year one predicted both motivational orientation ($\underline{b} = 0.70$, $\underline{F}\ (1, 69) = 34.69$, $\underline{p} < 0.0001$) and locus of control, ($\underline{b} = 0.17$, $\underline{F}\ (1, 60) = 5.20$, $\underline{p} < 0.03$) at year two, when controlling for year one locus of control and perception of cognitive competence. Children with more extrinsic motivational orientation at year one displayed more of an extrinsic orientation and more external attributions on the I.A.R. at year two.

As anticipated, I.A.R. score at year one predicted neither motivational orientation ($\underline{b} = 0.21$, $\underline{F}\ (1, 69) = 1.12$, $\underline{p} < 0.29$, n.s.), nor I.A.R. score ($\underline{b} = -0.08$, $\underline{F}\ (1, 60) = 1.80$, $\underline{p} < 0.19$,

n.s.) at year two, when controlling for year one motivational orientation and perception of cognitive competence. I.A.R. score at year one did, however, predict perception of cognitive competence at year two ($b = 0.78$, $F(1, 70) = 6.20$, $p < 0.02$) when controlling for year one motivational orientation and perception of cognitive competence. Children with more a more external locus of control at year one had lower perception of competence at year two.

Perception of cognitive competence at year one did not predict motivational orientation, ($b = 0.02$, $F(1, 69) = 0.07$, $p < 0.80$, n.s.), I.A.R. score ($b = -0.08$, $F(1, 60)=2.89$, $p < 0.09$, n.s.), nor perception of cognitive competence ($b = -0.06$, $F(1, 70) = 0.20$, $p < 0.66$, n.s.) at year two, when controlling for year one motivational orientation and I.A.R.

DISCUSSION

The results of this study indicate that the intrinsic motivation perspective better predicts achievement and helplessness than does the locus of control perspective. Intrinsics scored higher on standardized tests of achievement and were more likely to increase the sophistication of their strategy use during the failure experience than were extrinsics. Locus of control, on the other hand, was not predictive of achievement scores and was only marginally predictive of changes in sophistication of strategy during the failure experience.

Furthermore, the year two data indicate that extrinsics are more prone to developing external loci of control than are intrinsics. Children with external loci of control, on the other hand, are no more prone to developing an extrinsic motivational orientation than are other children.

These findings, taken together, speak to the importance of increasing our understanding of the roots of motivational orientation and increasing our ability to foster intrinsic motivation in children. Boggiano, Barrett, Main and Katz (1985) proposed that an extrinsic motivational orientation toward schoolwork stems from a feeling of lack of control in the classroom, which in turn, stems from experiences with teachers who afford little autonomy to their students. If this is indeed the case, educators might benefit from instruction on ways to promote feelings of autonomy in their classrooms in order to minimize the deleterious effects of an extrinsic motivational orientation.

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